FINANCIAL SECRETARIAT.

No. 321—*Mus.* 70-33-2, *dated* 11*th September* 1933.

In pursuance of para 4 of the scheme approved by the Board of Commissioners for Hindu Religious Endowments, Madras, in their Order No. 1040—C., dated 23rd May 1933, for the administration of Sri Ranganathaswami, etc., Devasthanams at Sivasamudram, Kollegal Taluk, Coimbatore District and its endowments, the Government of His Highness the Maharaja of Mysore are pleased to nominate the Deputy Commissioner, Mysore District, as the Trustee on behalf of Government for the management of the abovesaid temples and their endowments.

By Order,
A. N. RAGHAVACHAR,
Financial Secretary to Government.

RAILWAY SECRETARIAT.

NOTIFICATION.

Railways.

No. R. S. 653–54; dated 16th September 1933.

Under section 31 of the Mysore Railway Regulation IV of 1894, the Government of His Highness the Maharaja of Mysore, sanction the adoption, on the Railways over which the Mysore Government, have jurisdiction, of the following further amendments, to the General Rules, for working Open Lines of Railways, published with their Notification No. R. S. 2010, dated 25th January 1930.

By Order,
A. A. KHAN,
Secretary for Railways,
Government of Mysore.

I. In the Schedule appended to Part III of the said rules—

(1) In column 6 against Serial Nos. 17, 18, 19, 21, 22, 24, 25, 26, 30 to 38, 46, 50, 51 and 52 for the condition "By *brake-van of mixed or passenger* train, one case per consignee. It must be placed as far as possible from other packages in the brake-van" against Serial No. 49 for the condition "By *brake-van of mixed or passenger* train one case per consignee, gross weight not exceeding 40 lbs. It must be placed as far as possible from other packages in the brake-van," and against Serial No. 52-A for the condition "By brake-van of mixed or passenger train, one package only. Must be placed as far as possible from other packages in the brake-van," the following condition shall be substituted, namely :—

"By *brake-van of mixed or passenger* train, to the extent possible. May be carried with other dangerous goods which are allowed to be carried in the brake-van of a mixed or passenger train provided no special regulations to the contrary are specified against such other dangerous goods in the Schedule. Packages containing dangerous goods enumerated in the Schedule must be placed together and as far as possible from other goods, dangerous or otherwise, in the brake-van."

(2) In column 6 against Serial Nos. 19, 22 and 26 the Note "In the case of Government consignments more than one case may be so carried, provided that the gross weight of the cases does not exceed two maunds," shall be omitted.

(3) After Serial No. 27, the following shall be inserted, namely :—

1	2	3	4	5	6
27-A.	Arsenic, oxides of.	Tins, bottles or strong paper packages, packed in cases, casks, lined with strong paper drums.	The word "poison," must be distinctly marked on each package by the sender.	No restriction as to quantity.	By mixed train, no restriction as to quantity but only carried when no goods trains are running. May be despatched by brake-van of mixed or passenger train in any quantity at any time, if desired. The cases, casks, or iron drums must not be loaded with other goods liable to be damaged thereby (such as food-stuffs, textile, fabrics, leather and rubber goods) or with inflammable liquids.

(4) For Serial No. 56, the following shall be substituted, namely :—

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
56	PERMANENT GASES.— Compressed Atmospheric Air. Compressed Coal Gas. Compressed Hydrogen. Compressed Oxygen. LIQUEFIED GASES.— Liquefied Anhydrous Ammonia or Compressed Ammonia Gas. Liquefied or Compressed Carbonic Acid Gas (Carbon Dioxide). Liquefied or Compressed Chlorine. Liquefied or Compressed Nitrous Oxide. Liquefied or Compressed sulphurous Acid Gas (Sulphur Dioxide). Liquefied or Compressed Sulphuretted Hydrogen. Liquefied or Compressed Methyl Chloride (inflammable and non-inflammable).	(a) These gases must be packed in cylinders. (b) Cylinders must be made in accordance with Specification No. 1 or in the case of "Liquefied" Gases in accordance with Specification No. 2 and in the case of "Permanent" Gases according to Specification No. 3 or 4 laid down in Appendix IV. (c) Cylinders must not be charged to a greater extent than the following :— Compressed Gases—1,800 lbs. per sq. in. Liquefied gases— Anhydrous Ammonia ... 0·54 Carbon Dioxide ... 0·75 Chlorine ... 1·25 Methyl Chloride ... 0·88 } per lb. of water capacity. Nitrous Oxide ... 0·75 Sulphur Dioxide ... 1·25 Sulphuretted Hydrogen ... 0·67 (d) (i) Cylinders of— Air, Atmospheric over 8 ft. in length and 10 ins. in diameter. — Each cylinder (including the valve) must be packed in a strong case. Air, Atmospheric up to 8 ft. in length and 10 ins. in diameter. Coal Gas. Hydrogen. Nitrous Oxide. Oxygen. — May be accepted naked provided a squared metal shoe or collar is fitted at each end of the cylinder. Each cylinder, which is not fitted with a squared metal shoe or collar at each end, must including the valve be securely packed in one of the following ways :— (a) In a cover of continuous wood lagging not less than ⅛ in. thick. (b) In a cover of closely plaited 1 in. (circumference) hemp or coir. (c) In a strong case, except that such case may contain more than one cylinder, provided the cylinders are closely packed within the case and the gross weight of the case and contents does not exceed 2½ cwts. (ii) Cylinders of— Anhydrous Ammonia. Carbonic Acid Gas. Chlorine. Methyl Chloride. Sulphuretted Hydrogen. Sulphurous Acid Gas. — May be accepted naked, provided the valves are completely recessed in the cylinders or completely protected by screwed metal caps, and a squared metal shoe or collar is fitted at each end of the cylinder. Each cylinder, the valve of which is not completely recessed or capped and which is not fitted with a squared metal shoe or collar at each end, must, with the valve, be securely packed in one of the ways mentioned above.	Cylinders, whether covered or naked, must be carefully handled, and must not be exposed to the rays of the sun nor to the heat of the fire, stove, or other source of heat. Each cylinder must bear a firmly secured label showing the name and address of consignee, and empty cylinders must be labelled "Empty."	No restriction as to quantity. Other commodities, including dangerous goods (not explosives or inflammable liquids or empties which have contained inflammable liquids or any of the substances mentioned against Serial Nos. 19, 21, 22, 25 and 26 or matches, non-safety) may be loaded in the same vehicle with cylinders containing Liquefied Anhydrous Ammonia or Compressed Ammonia Gas, Compressed Atmospheric Air, Liquefied or Compressed Carbonic Acid Gas (Carbon Dioxide), Compressed Hydrogen, Liquefied or Compressed Methyl Chloride or Compressed Oxygen, provided that not more than ten cylinders in all are loaded in the same vehicle and that they are well separated from the other commodities. Cylinders of which the gross weight is 15 cwts. or over must be conveyed in through wagons to destination and not be transhipped. They should be dealt with as far as practicable in the open and must be adequately secured and scotched to prevent rolling in the wagons and if carted by the Railway Company the unloading at the Consignee's premises must be performed entirely by and at the responsibility of the consignee. Wagons used for conveying cylinders of which the gross weight is 15 cwts. or over must be such that the unloading can be performed without lifting the cylinders to a greater height than 6 feet from the rail level. The wagons, which must not contain any corrosive or heavy articles, likely to damage the cylinders, must have affixed on each side a suitable approved label to be provided by the consignor indicating the nature of the contents of the cylinders and the necessity for exercising care in dealing with the wagon and its contents. In case of emergency in which it is necessary to remove cylinders of which the gross weight is 15 cwts. or over from the wagons, only such cranes and hook chains as have been certified to have a lifting power of at least 10 cwts. more than the gross weight of the cylinders must be used. Empty Cylinders.—All gas must be blown off and the valve closed gas tight. A declaration that the packing is in accordance with these conditions must be entered on the Consignment Note.	By mixed train, no restriction as to quantity but only carried when no goods trains are running. Liquefied Anhydrous Ammonia or Compressed Ammonia Gas, Compressed Atmospheric Air, Liquefied or Compressed Carbonic Acid Gas (Carbon Dioxide), Compressed Hydrogen or Compressed Oxygen may be allowed in exceptions to the other Liquefied and Compressed Gases, to be carried in the rear brake-van of mixed or passenger trains, subject to a limit of ten cylinders per van. The cylinder must be placed as far as possible from other packages in the brake-van. Cylinders containing Compressed Oxygen should not be carried in the same brake-van of the same mixed or passenger train as cylinders containing Dissolved Acetylene Gas. A brake-van of a mixed or passenger train should not carry more than 10 cylinders in all. Cylinders must not be loaded with inflammable liquids or empties which have contained inflammable liquids.

(5) In column 2 against Serial No. 61, for the words "zinc dust or tutty powder", the following shall be substituted, namely :—

"Magnesium powder
Zinc dust or tutty powder".

(6) In column 3 against Serial No. 62 after regulation (3) the following regulation shall be inserted namely :—

"(4) Matches, safety, may also be carried in fireboard cases provided that the cases comply in every respect with any regulations on the subject which may be made by the Railway Administration with the approval of the Chief Inspector of Explosives in India."

II. For Appendix IV to the said rules, the following Appendix shall be substituted, namely :—

APPENDIX IV.

(See Serial No. 56 in the Schedule.)

SPECIFICATION No. 1.

SPECIFICATIONS AND REGULATIONS FOR CYLINDERS (MANUFACTURED PRIOR TO 1ST SEPTEMBER 1931) FOR / OF COMPRESSED GASES.

1. Cylinders must be made of wrought iron or mild steel of the best quality, containing not more than 0·25 per cent. of Carbon and not less than 99·0 per cent. of total iron. The tensile Breaking Strength of the steel must not be less than 26 tons or more than 33 tons per square inch. The Ultimate Elongation on test pieces of 8 inches gauge length must not be less than 1·2 inches. The mechanical test pieces to be cut from a finished annealed cylinder 2.

Cylinders for		Maximum over all length.	Maximum external diameter.	Maximum stress in metal at internal pressure shown in columns 4 and 5.	Maximum pressure of gas	Assumed pressure of gas
		Feet	Inches	Tons per square inch	lbs. per square inch	lbs. per sq. inch for purpose of calculating working stress in metal
		(1)	(2)	(3)	(4)	(5)
Anhydrous Ammonia	Wrought Iron	8	10	6	...	1,000
	Mild steel	8	10	7	...	1,000
Argon					1,800	...
*Atmospheric Air					1,800	...
Coal Gas					1,800	...
Hydrogen					1,800	...
Methane					1,800	...
Neon					1,800	...
Nitrogen					1,800	...
Oxygen	Wrought iron	8	10	6½	1,800	...
Carbon Dioxide (Carbonic Acid Gas.)	Lap-welded mild steel	8	10	7½	...	1,800
	Seamless mild steel	8	10	8	...	1,800
Chlorine					...	1,800
Methyl Chloride					...	1,800
Nitrus Oxide					...	1,800
Phosgene (Carbonyl Chloride)					...	1,800
Sulphur Dioxide (Sulphurous Acid Gas).					...	1,800
Sulphuretted Hydrogen						
Nitrous Oxide (alternative)	Wrought iron	8	10	6	...	1,800
	Lap-welded mild steel					
	Seamless mild steel					

* Cylinders for Diesel Oil Engines may measure up to 11 feet overall length and 20 inches external diameter.

2. Each cylinder must be annealed before use.

4. Each cylinder must be subjected to a hydraulic pressure as follows :—

Anhydrous Ammonia Cylinders ...	1,800 lbs.	per sq. in.
Chlorine Cylinders ...	600 "	"
Sulphuretted Hydrogen Cylinders ...	300 "	"
All other Cylinders ...	3,000 "	"

and under the test the permanent set must not exceed 10 per cent. of the elastic stretch. The hydraulic test must be repeated every two years.

5. One cylinder in 50 to be subjected to a statical bending test and to stand crushing nearly flat between rounded knife edges without cracking.

6. Each cylinder must have stamped on it in clear and permanent characters the following :—

(a) Date (year) of the last hydraulic test.
(b) A serial number.
(c) Manufacturer's or owner's name and address (on cylinder or valve).

Cylinders containing Liquefied gases must also show in permanent characters :—

(a) The weight of the Empty Cylinder.
(b) The weight of the Contents, when fully charged.

Cylinders containing compressed (but not liquefied) gases must also show by marks stamped on the cylinder, or by a label attached to it, the volume of gas compressed into the cylinder when fully charged.

7. Hydrogen and Coal Gas Cylinders to have left-handed threads for attaching connections.

8. A record to be kept of all tests.

9. Cylinders which fail in testing to be destroyed or rendered useless.

10. Each Cylinder should be painted according to the gas for which it is used as specified in the Specification for Identification colour for Gas Cylinders given at the end of this appendix.

11. The compressing apparatus to have two pressure gauges and an automatic arrangement for preventing overcharging. The compressing apparatus for Oxygen to be wholly distinct and unconnected with the compressing apparatus for hydrogen and coal gas.

12. Cylinders not to be refilled till they have been emptied.

13. Cylinders must be packed as provided for in the "General packing regulations" column.

14. No oil or similar lubricant to be used for cylinder valves, pressure gauges, regulators, or other fittings.

15. Pressure gauges to have a check to prevent a sudden in rush of gas.

16. In the case of cylinders containing liquefiable gases a notice should be affixed to the cylinders in decanting the contents and that they should be kept cool and not exposed to the sun or the heat of a stove.

17. Pressure gauges for hydrogen and coal gas to have left-handed screws.

18. Carbonic Acid and Ammonia Cylinders should not contain more than 2/3 and 0·5 lb. respectively per pound of water capacity.

19. *Alternative Cylinders for Chlorine*—

	Inches.
(1) Length over-all not to exceed ...	44
External diameter not to exceed	8½
Minimum thickness of metal ...	0·17
(2) Length over-all not to exceed ...	76
External diameter not to exceed	10
Minimum thickness of metal ...	0·25

Each cylinder must have hemispherical ends, and must be either seamless or have lap-welded longitudinal joint, such weld to be made by an approved mechanical process and finished so as to leave the inside and outside surfaces quite smooth. They must also be provided with a screw-on cap, effectively protecting the valve. The over-all length must include the screw-on cap.

In all other respects the cylinders must comply with the regulations applicable to Chlorine Cylinders shown in Clauses 1 to 16.

Alternative Cylinders for Sulphuretted Hydrogen—

	Inches.
(i) External diameter not to exceed	4
Minimum thickness of metal ...	0·16
(ii) External diameter not to exceed	8
Minimum thickness of metal ...	0·1875

In all other respects the Cylinders must comply with the regulations applicable to Sulphuretted Hydrogen Cylinders shown in Clauses 1 to 16.

SPECIFICATION NO. 2.

SPECIFICATIONS AND REGULATIONS FOR CYLINDERS FOR/OR LIQUEFIABLE GASES.

NOTE.—Where 0·25 carbon steel is used for the construction of cylinders for the permanent gases, the relevant clauses in this specification for cylinders for carbon dioxide, nitrous oxide and ethylene should be adopted except that the test pressure for the cylinders in the case of permanent gases may be 3,000 lbs. per sq. inch.

The summary of recommendations (clauses 1 to 28) for ordinary commercial cylinders for the storage and transport of Liquefiable gases given on pages 32 to 40 of the 4th Report of the Gas Cylinders Research Committee (Cylinders for Liquefiable gases), a copy of which was sent to the General Secretary, Indian Railways Conference Association with this office letter No. G-1 (39)-2, dated 15th July 1932, should be reproduced here and the following alterations made therein :—

(1) The heading "Summary of Recommendations for Ordinary Commercial Cylinders for the storage and transport of Liquefiable Gases" on page 32 should be omitted.

(2) The foot-note on page 32 should be omitted.

(3) The Asterisk* on the word "Pressure" in the heading of Table II on page 34 and the connected foot-note should be omitted.

(4) The word "Regulations" should be substituted for the word "Recommendations" in the heading of the Special Recommendations given below clause 20 on page 39.

(5) The words "for valve fittings for Compressed Gas Cylinders" given at the end of this appendix should be substituted for the words "of the British Engineering Standard's Association†" in clause 23 and the connected foot-note omitted.

(6) The words "Specification for indentification colours for Gas Cylinders" given at the end of this appendix should be substituted for the words "Scheme recommended by the British Engineering Standard's Association*" in clause 24 and the connected foot-note omitted.

SPECIFICATION No. 3.

SPECIFICATIONS AND REGULATIONS FOR "HIGH CARBON" STEEL CYLINDERS FOR OF "PERMANENT" GASES.

Summary of recommendations (clauses 1 to 22) on ordinary commercial cylinders for the storage and transport of the so-called "permanent" gases as given in the summary of recommendations (revised) issued by the Department of Scientific and Industrial Research Gas Cylinders Research Committee in 1929 a copy of which was sent to the General Secretary, Indian Railways Conference Association with this office letter No. G.-1 (39)-2, dated the 15th July 1932, should be reproduced here and the following alterations made therein :—

(1) The headings appearing above clause 1—The material of the cylinders—and the foot-note on page 1 should be omitted.

(2) The last two lines of the foot-note (Both methods.....committee) on page 4 should be omitted.

(3) The following should be substituted for the foot-note § on page 6 :—

"§Specification for valve fittings for Compressed Gas Cylinders is given at the end of this appendix".

(4) The words "Specification for indentification colours for Gas Cylinders given at the end of this appendix" should be substituted for the words "Scheme recommended by the British Engineering Standard's Association" in clause 18 and the connected foot-note omitted.

(5) The mark * on the word "desirable" in clause 20 and the connected foot-note should be omitted.

SPECIFICATION No. 4

SPECIFICATION OF "LOW CARBON" STEEL CYLINDERS FOR "PERMANENT" GASES.

The cylinders must be made in accordance with the clauses of specification No. 2 for cylinders for Carbon dioxide, Nitrous oxide and Ethylene specified in the Note below the heading "Specifications and regulations for cylinders for of Liquefiable gases" therein.

SPECIFICATION FOR VALVE FITTINGS FOR COMPRESSED GAS CYLINDERS.

1. VALVE FITTINGS.

General.

1. Valves for the various gases given in Column 1 of Tables and I-A shall be made of the material indicated in Column 2 and the screw threads on the valve outlet shall be as indicated in Column 4.

NOTE.—It is considered that valves made to the requirements of this Specification, when screwed tightly into the appropriate cylinder neck, will form a union which will have ample strength to withstand all test-pressures.

Marking.

2. Valves shall be stamped with the name or the chemical symbol of the gas for which they are to be used.

Valve Stem.

3. The Valves for the gases shown in Tables I and I-A shall be provided with a stem 1⅛ in. ong ± 1/64 in. for stems of 1 in. diameter, and 1 in. long ± 1/64 in. for stems 0·715 in. diameter, having in both cases a taper of 1 in 8 on diameter. It shall be screwed for the whole of its length. The diameter of the stem shall be measured at the small end in both cases.

The screw thread shall be right-handed and of the dimensions given in Table 2.

The valve stem, when screw down tight shall engage with the cylinder not less than ⅜ inch.

Special valve stems.

4. Cylinders and valve stems for Nitrous Oxide, Sulphur Dioxide, Ethylene, Helium and Neon, and for small cylinders of other gases, may be screwed parallel if desired as an alternative to taper stems Clause 3. In such cases the valve stem shall be 1⅛ in. long 1/64 in. screwed ⅜ in. B. S. P. 14 T.P.I. or 1 in. long ± 1/64 in. screwed ½ in. B.S.P. 14 T.P.I. or ⅝ in. long ± 1/64 in. screwed ½ in. B. S. P. 19 T. P. I.

Outlet of valve fitting.

5. The outlet of the valve fitting shall conform to the requirements specified in Tables I and I-A, Columns 3 and 4 shall be screwed parallel. The special screw thread specified for Carbon Dioxide valves shall be in accordance with Table 3.

The outlet boss for Ammonia, Carbon Dioxide, Chlorine, Ethyl Chloride, Methyl Bromide, Methyl Chloride, Nitrous Oxide, Phosgene, and Sulphur Dioxide, shall be screwed externally, and together with the corresponding union nut shall be in accordance with Tables 1 and 1-A. All other outlet bosses shall be screwed internally.

Spindle.

6. The spindle end shall be square and of the size shown in Column 5 of Tables 1 and 1-A unless a hand wheel is permanently attached to the spindle.

Safety Release for Carbon Dioxide Cylinders.

7. The valve fittings for gas cylinders for Carbon Dioxide shall be provided in the body of the fitting with a safety release.

The safety release device in valves for cylinders used for export, refrigerating, and fire extinguishing, shall consist of a softened copper disc so arranged as to burst at a pressure between 2,600 and 2,850 lbs. per sq. in.

TABLE 1.

Details of Valves (see clause 8.)

1 Gas. Name	Symbol	2 Material of valve	3	4 Screw Thread of Outlet	5 Spindle square in.
Acetylene*	C_2H_2	Bronze	Internal	Left-handed BSP 5/8 in. 14TPI	9/32
Air	...	Bronze	Internal	Right-handed BSP 5/8 in. 14TPI	9/32
Ammonia	NH_3	Steel	External	Right-handed BSP 1/2 in. 14TPI	3/8
Argon	A	Bronze	Internal	Right-handed BSP 5/8 in. 14TPI	9/32
Carbon Dioxide	Co_2	Bronze	External	Right-handed Full Dia. 0·630" 0·007 BSW × 14TPI.	...
Carbon Monoxide	Co	Bronze	Internal	Left-handed BSP 5/8 in. 14TPI ...	9/32
Chlorine	C^{12}	Steel	External	Right-handed BSP 5/8 in. 14TPI	3/8
Coal Gas	...	Bronze	Internal	Left-handed BSP 5/8 in 14 TPI ...	9/32
Ethyle Chloride (inflammable and non-inflammable grades).	CH_3 CH_2 Cl	Steel or Bronze.	External	Left-handed BSP 5/8 in. 14TPI ...	3/8
Ethylene (large cylinders)	C_2H_4	Bronze	Internal	Left-handed BSP 5/8 in. 14TPI ...	9/32
Helium (large cylinders)	He_2	Bronze	Internal	Right-handed BSP 5/8 in. 14TPI	9/32
Hydrogen	H	Bronze	Internal	Left-handed BSP 5/1 in. 14TPI ...	9/32
Methane	CH_4	Bronze	Internal	Left-handed BSP 5/8 in. 14TPI...	9/32
Methyl Bromide	CH_3Br	Steel or Bronze.	External	Right-handed BSP 5/8 in 14TPI	3/8
Methyl Chloride (inflammable and non-inflammable grades)†	CH_3 Cl	Steel or Bronze.	External	Left-handed BSP 5/8 in. 14TPI ...	3/8
Neon (large cylinders)	Ne	Bronze	Internal	Right-handed BSP 5/8 in. 14TPI	9/32
Nitrogen	N	Bronze	Internal	Right-handed BSP 5/1 in. 14TPI	9/32
Nitrous Oxide	N^2O	Bronze	External	Right-handed BSP 11/16 in. 20TPI	15/64
Oxygen	O	Bronze	Internal	Right-handed BSP 5/8 in. 14TPI	9/32
Phosgene	$COCl_2$	Steel	External	Right-handed BSP 5/8 in. 14TPI	3/8
Sulphur Dioxide	SO_2	Steel or Bronze.	External	Right-handed BSP 1/2 in. 14 TPI	3/8

* Excluding small cylinders and cylinders for special purposes.
† See Table 3.

TABLE 1-A.

Alternative valves for use with cylinders of 25 lb. Water capacity and under.

1 Gas.	2 Material of valves	3 Screw	4 Thread of outlet	5 Spindle Square in.
Chlorine	Steel ...	External ...	Right-Handed. B. S. P. 5/8 in 19, T.P.I.	9/32
Ethyl Chloride (Inflammable and non-inflammable grades)	Steel or Bronze ...	External ...	Left-Handed B. S. P. 1/4 in. 19 T.P.I.	9/32
Methyl Bromide	Steel or Bronze ...	External ...	Right-Handed B. S. P. 1/4 in. 19 T. P. I.	9/32
Methyl Chloride (Inflammable and non-inflammable grades)	Steel or Bronze ...	External ...	Left-Handed B. S. P. 1/4 in. 19 T. P. I.	9/32
Phosgene	Steel ..	External ..	Right-Handed B. S. P. 5/8 in. 19 T. P. I.	9/32
Sulphur Dioxide	Steel or Bronze ...	External ..	Right-Handed B. S. P. 1/4 in. 19 T. P. I.	9/32

TABLE 2.

SCREW THREAD DIMENSIONS OF 1-INCH AND 0·715-INCH STANDARD TAPER STEM AND CORRESPONDING CYLINDER NECK.

Taper 1 in. 8 on diameter. 14 T. P. I. measured along the taper. Standard Whitworth form 55° cut at right angles to the taper.

A.—1 inch Standard Taper Stem and corresponding Cylinder Neck.

1	2	3	4	5
	Taper stem at small end		Corresponding cylinder neck at outer end	
	Maximum	Minimum	Maximum	Minimum
Full Diameter	1·0000	0·9930	1·1045	1·0988
Effective Diameter	0·9542	0·9489	1·0532	1·0479
Core Diameter	0·9088	0·9076	1·0101	1·0021

All dimensions in inches.

B.—0·715-inch Standard Taper Stem and corresponding Cylinder Neck.

1	2	3	4	5
	Taper stem at small end		Corresponding cylinder neck at outer end	
	Maximum	Minimum	Maximum	Minimum
Full Diameter	0·7150	0·7070	0·8195	0·8087
Effective Diameter	0·6692	0·6639	0·7682	0·7629
Core Diameter	0·6238	0·6176	0·7251	0·7171

All dimensions in inches.

TABLE 3.

Screw Thread Dimensions of valve Outlet, union Nut and Tap Thread of valves for Carbon Dioxide Cylinders (Wickman Gauging System—M. Limits).

Outside diameter of thread ... ... 0·8600
No. of threads per inch 14
Standard single depth of thread ... ... 0·0457

1	2	3	4	5	6	7	8	9	10
	Valve outlet			Union nut			Tap		
	Maximum	Minimum	Tolerance	Maximum	Minimum	Tolerance	Maximum	Minimum	Tolerance
	in.	in.	in.	in.	in.	in.	in.	in.	in.
Full Diameter	0·8600	...	...	...	...	...	0·8780	0·8680	0·0100
Effective Diameter	0·8149	0·8078	0·0070	0·8318	0·8148	0·0070	0·8208	0·8148	0·0055
Core Diameter	0·7690	...	...	...	...	...	0·7770	0·7690	0·0080

TABLE 4.

Dimensions of British Standard Pipe Threads of $\frac{1}{8}$, $\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$, $\frac{5}{8}$ and $\frac{3}{4}$ inch Nominal Bore.

Nominal Bore of Tube	Approximate outside Diam. of Black Tube	Gauge Diam.*	Depth of Thread	Core Diam. measured at same distance from end of pipe as gauge diam.	Number of threads per inch	Length of thread		Distance of Gauge Diam. from Pipe End. (Class L. Taper Screw).		
						L on pipe end Min.	In coupler Min.	Standard	Maximum	Minimum
	in.	in.	in.	in.		in.	in.	in.	in.	in.
1/8	17/32	0·518	0·0395	0·451	19	7/16	7/8	3/16	0·23	0·16
1/4	11/16	0·656	0·0395	0·569	19	1/2	1	1/4	0·29	0·21
3/8	27/32	0·825	0·0455	0·734	14	5/8	1-1/4	1/4	0·29	0·21
1/2	15/16	0·902	0·0455	0·811	14	5/8	1-1/4	1/4	0·29	0·21
5/8	1-1/16	1·041	0·0455	0·960	14	3/4	1-1/2	3/8	0·44	0·31
3/4										

* The gauge diameter is the full diameter of the Standard Male Parallel Screw Gauge which the Parallel Coupler to be used with a pipe of that size is required to fit.

TABLE 5.

Dimensions of B. S. W. Screw Threads of 11/16 inch Nominal Diameter of Screw.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	Nominal Diam. of Screw	Number of Threads per inch.	Pitch	Tolerances		Full Diameter			Effective Diameter			Core Diameter			Grade	Max. play permissible
				Pitch	Angle	Max.	Tol.	Min.	Max.	Tol.	Min.	Min.	Tol.	Max.		
	in.		in.	in.	deg.	in.	in.	in.	in.	in.	in.	in.	in.	in.	Thousandths of an inch.	
Bolt	11/16	11	0·09091	0·0016	3·2	0·6875	0·0090	0·6785	0·6328	0·0060	0·6268	0·5711	0·0191	0·5590	12·0	6·0
Nut	11/16	11	0·09091	0·0016	3·2	0·6896	0·0191	0·7016	0·6318	0·0060	0·6378	0·5731	0·0090	0·5831	12·0	6·0

SPECIFICATION FOR IDENTIFICATION COLOURS FOR GAS CYLINDERS.

Ground Colour.

1. The gas cylinders shall be entirely covered with a coat of paint of the colour specified in Table 1.

Distinguishing Colour Band.

2. A distinguishing colour band shall be applied to the gas cylinders in accordance with Table 1. This distinguishing colour band shall be painted round the neck of each cylinder adjacent to the valve fitting and shall be wide enough to occupy half the portion of the cylinder between the junction of the hemispherical and cylindrical portions and the neck.

Any other distinguishing bands or marks, painted on the cylinder by the gas manufacturer or filler for his own purpose, should be placed on the body of the cylinder. The neck of the cylinder may have a painted aluminium panel to show up the marking.

For gases other than those provided for in Table 1, the cylinders shall be specially labelled indicating the nature of the contents.

Standard Colours.

3. The colours used both for the ground colour and the distinguishing colour band shall be in accordance with the British Standard list of Colours for Ready Mixed Paints (See Schedule I).

TABLE 1.

Standard Identification Colours for Gas Cylinders.

Gas		Ground colour of Cylinders		Colour of Bands	
Name	Symbol	Nominal	British Standard Colour No.*	Nominal	British Standard Colour No.*
Acetylene	C_2H_2	Maroon	41	None	...
Air		Grey	30	None	...
Ammonia	NH_3	Black	...	Red and Yellow†	37 and 56
Argon	A	Blue	8	None	...
Carbon Dioxide for tropical and marine use.	CO_2	Black	...	White or aluminium paint.	...
Carbon Monoxide	CO	Red	37	Yellow	56
Chlorine	Cl	Yellow	56	None	...
Chlorine cylinders fitted with internal dip pipes.		Yellow	56	Black	...
Coal Gas		Red	37	None	...
Ethyl Chloride, inflammable	C_2H_5Cl	Grey	30	Red	37
Ethyl Chloride, non-inflammable		Grey	30	None	...
Ethylene	C_2H_4	Mauve	...	Red	37
Helium	He	Medium Brown	45	None	...
Hydrogen	H	Red	37	None	...
Methane	CH_4	Red	37	None	...
Methyl Bromide	CH_3Br	Blue	8	Black	...
Methyl Chloride, inflammable	CH_3Cl	Green	25	Red	37
Methyl Chloride, non-inflammable		Green	25	None	...
Neon	Ne	Medium Brown	45	Black	...
Nitrogen	N	Dark Grey	32	Black	...
Nitrous Oxide	N_2O	Aluminium paint	...	None	...
Oxygen	O	Black	...	None	...
Phosgene	$COCl_2$	Black	...	Blue and Yellow†	8 and 56
Sulphur Dioxide	SO_2	Green	25	Yellow	56

* *See* Schedule I.
† The red or blue band shall be placed adjacent to the valve fitting and the yellow band between that and the ground colour the cylinder.

SCHEDULE I.

EXTRACT OF COLOURS FROM BRITISH STANDARD LIST OF COLOURS FOR READY MIXED PAINTS.

British Standard Colour No.	Colour.
8	Peacock Blue.
25	Light Brunswick Green.
30	French Grey.
32	Dark Battleship Grey.
37	Signal Red.
41	Maroon.
45	Venetian Red.
56	Golden Yellow.